

FIG 1

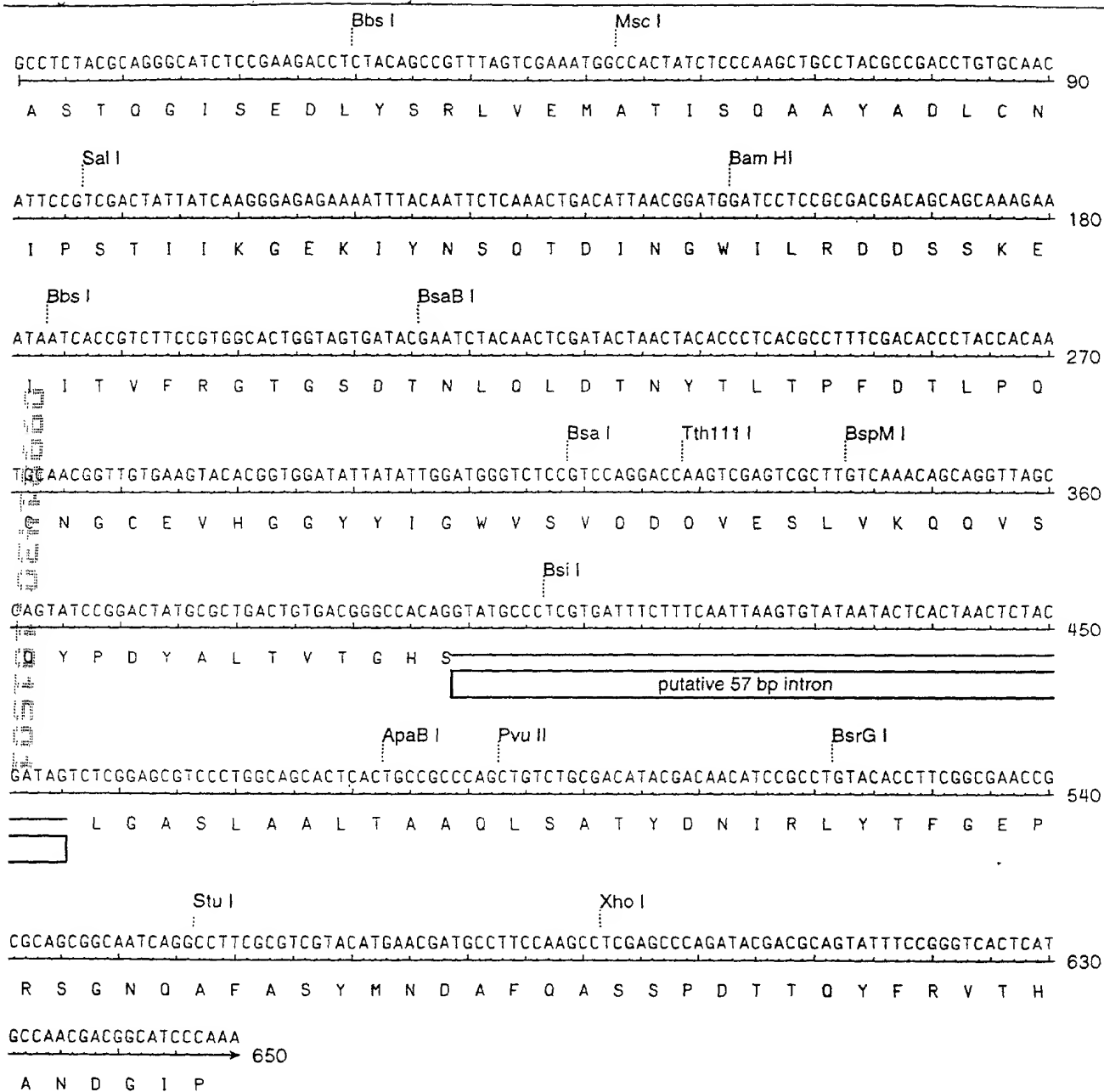
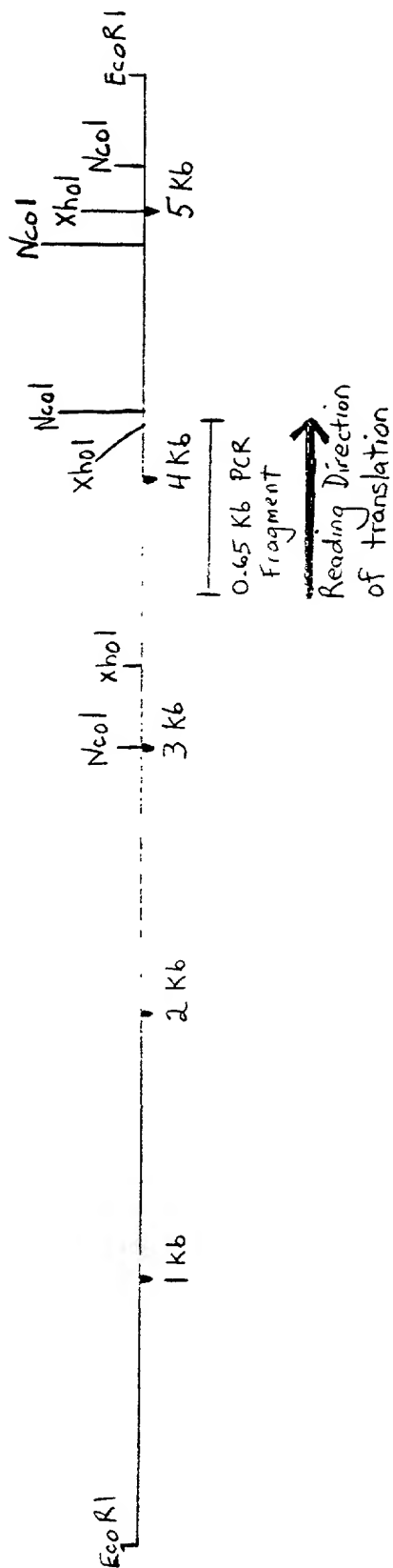


FIG. 2

1



5.5 Kb EcoRI Fragment cloned into PLITMUS 28 E. coli plasmid

FIG. 4

Nco I EcoR V Psp1406 I
 CCATGGTGGTGTGATATCGGCAGTAGTCTTTGCCGAAACGTTGAGGGTTACAGTGATCTGCGTCGGACATACTTCGGGGAATCTACGGC 90
 GGAATATCAAAGTCTTCGGAATATCCATATTGGGAAAGGACAGAAGCTCCGGGGTAGTTTGATAGATGAGCTCCGGTGTATTAAATCGGG 180
 AGCTGACAGGAGTGAGCGTCATGTAGACCATCTAGTAATGTCAGTCGCGCGCAATTTCCGCACATGAAACAAGTTGATTTCCGGGACCCCAT 270
 TGTTACATCTCTCGGCTACAGCTCGAGATGTGCCTGCCGAGTATACTTAGAAGCCATGCCAGCGTGTGTTATACGACCAAAAGTCAGGG 360
 AATATGAAACGATCGTCGGATATTTCTTGTTTTATCCTAAATTAGTCTTCCAGTGGTTTATTTAAGAGATAGATCCCTTCACAAACACT 450
 CATCCAACGGACTTCTCATACCACTCATTGACATAATTTCAAACAGCTCCAGGCGCATTAGTTCAACATGAAGCAATTCTCCGCCAAAC 540
 signal sequence
 M K Q F S A K
 Pst I Bpu10 I
 ACGTCCTCGCAGTTGTGGTGACTGCAGGGCAGCCTTAGCAGCCTCTACGCAAGGCATCTCCGAAGACCTCTACAGCCGTTTAGTCGAAA 630
 signal sequence
 H V L A V V V T A G H A L A A S T Q G I S E D L Y S R L V E
 Msc I Sal I
 TGGCCACTATCTCCAAGCTGCCTACGCCGACCTGTGCAACATTCCGTCGACTATTATCAAGGGAGAGAAAATTTACAATTCTCAAACCTG 720
 M A T I S Q A A Y A D L C N I P S T I I K G E K I Y N S Q T
 BamH I BsaB I
 ACATTAACGGATGGATCCTCCGCGACGACAGCAGCAAGAAATAATCACCGTCTTCGTCGCACTGGTAGTGATACGAATCTACAACCTCG 810
 D I N G W I L R D D S S K E I I T V F R G T G S D T N L Q L
 Eco31 I
 ATACTAACTACACCCTCAGCCTTTTCGACACCCTACCACAATGCAACGGTTGTGAAGTACACGGTGGATATTATATTGGATGGGTCTCCG 900
 D T N Y T L T P F D T L P Q C N G C E V H G G Y Y I G W V S

Fig. 5A

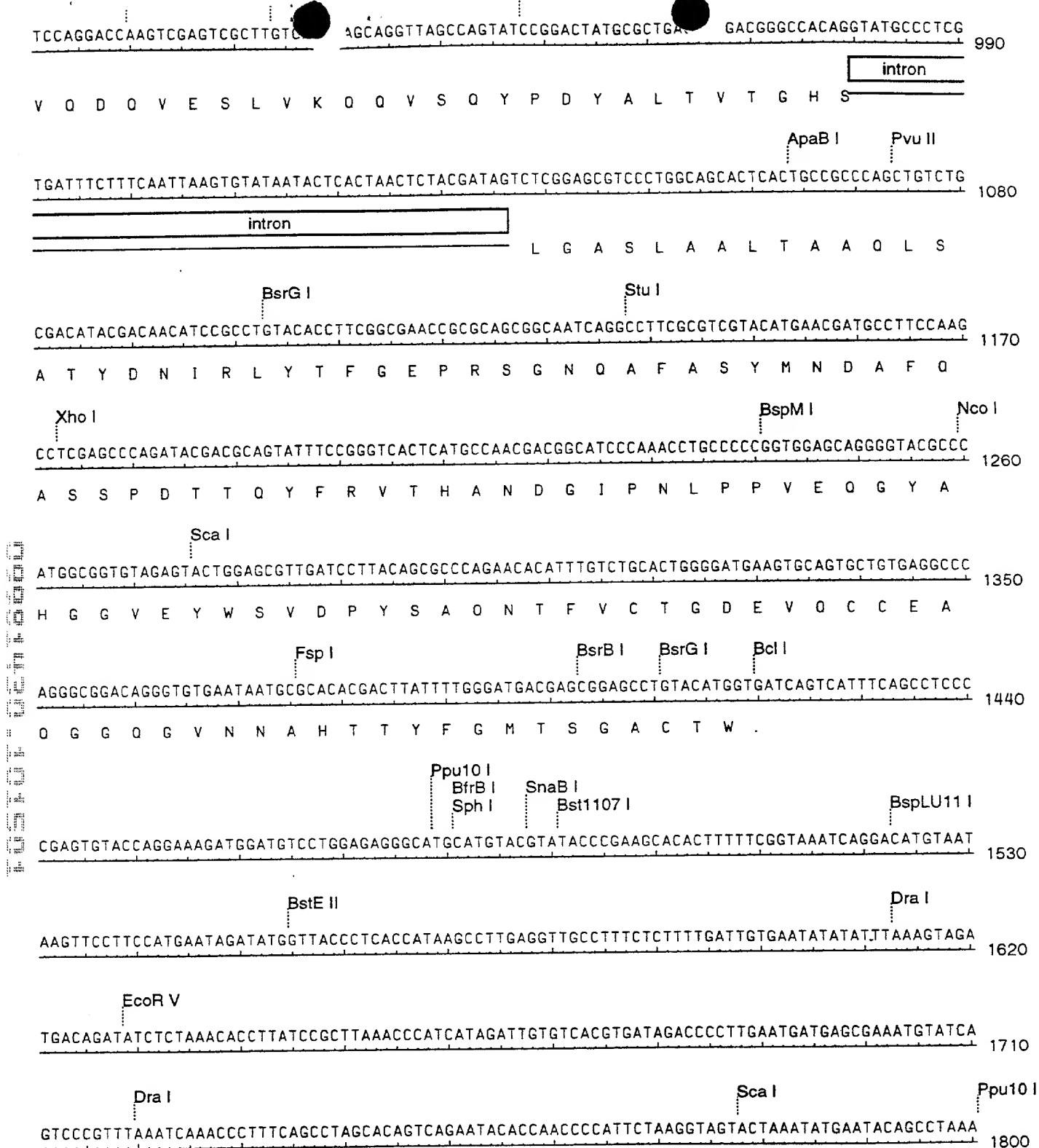
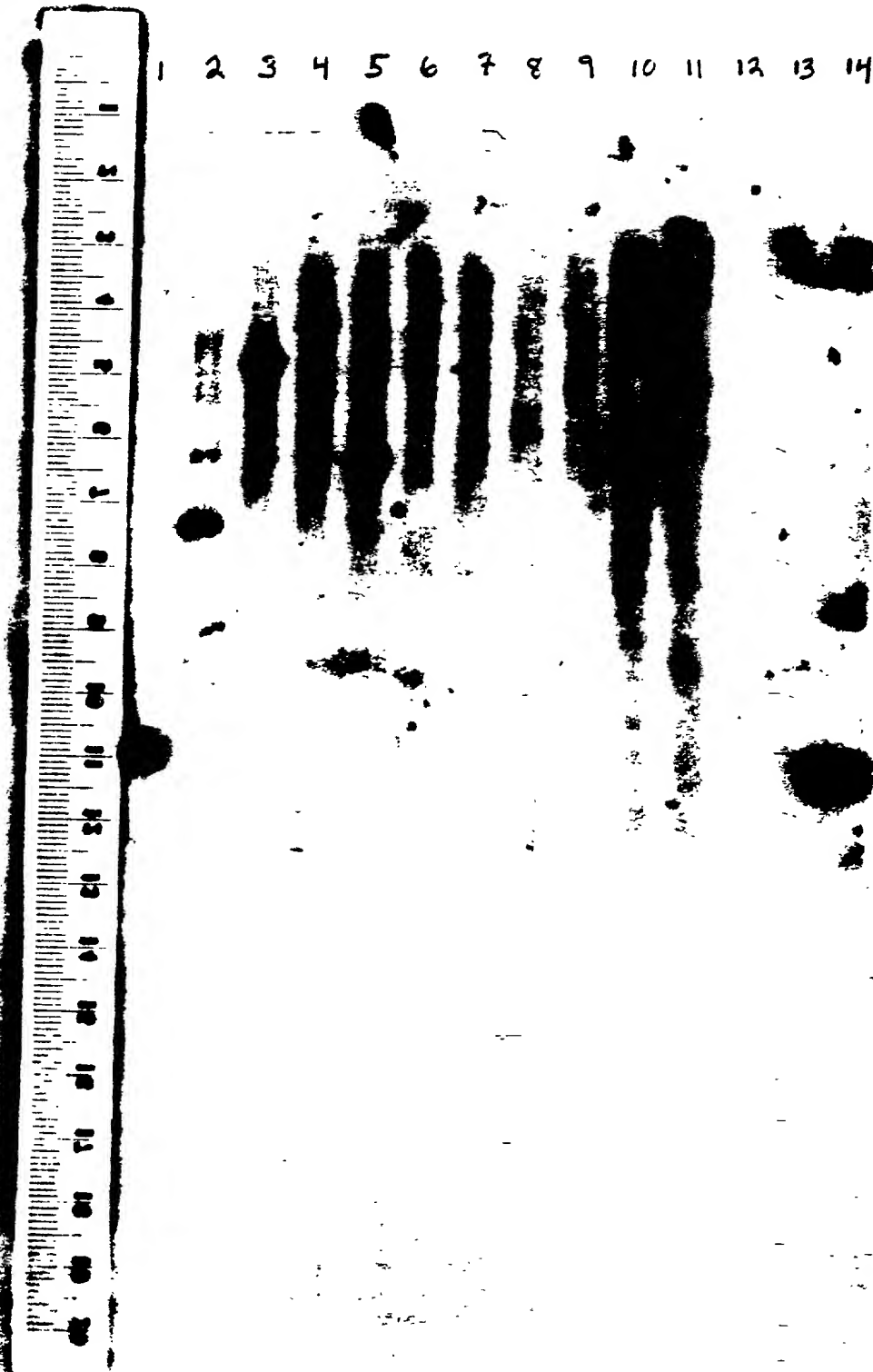


Fig 53

Figure 6 (SEQ.ID NO:29)

CCATGGTGGTGTGCATATCGGCAGTAGTCTTTGCCGAAACGTTGAGGGTTACAGTGATCTGCGTCGGACATACTT
CGGGGAATCTACGGCGGAATATCAAAGTCTTCGGAATATCCATATTGGGAAAGGACAGAAGCTCCGGGGTAGTTT
GATAGATGAGCTCCGGTGTATTAAATCGGGAGCTGACAGGAGTGAGCGTCATGTAGACCATCTAGTAATGTCAGT
CGCGCGCAATTTGCGACATGAAACAAGTTGATTTCCGGGACCCCATTTGTTACATCTCTCGGCTACAGCTCGAGATG
TGCCTGCCGAGTATACTTAGAAGCCATGCCAGCGTGTGTTATACGACCAAAAGTCAGGGAATATGAAACGATCG
TCGGATATTTCTTGTTTTATCCTAAATTAGTCTTCCAGTGGTTTATTTAAGAGATAGATCCCTTCACAAACACT
CATCCAACGGACTTCTCATACCACTCATTGACATAATTTCAAACAGCTCCAGGCGCATTTAGTTCAACATGAAGC
AATTCCTCCGCCAAACACGTCTCGCAGTTGTGGTGAAGTGCAGGGCACGCCCTTAGCAGCCTCTACGCAAGGCATCT
CCGAAGACCTCTACAGCCGTTTAGTCGAAATGGCCACTATCTCCCAAGCTGCCTACGCCGACCTGTGCAACATTC
CGTCGACTATTATCAAGGGAGAGAAAATTTACAATTCTCAAACAGCTGACATTAACGGATGGATCCTCCGCGACGACA
GCAGCAAAGAAATAATCACCGTCTTCCGTGGCACTGGTAGTGATACGAATCTACAACCTCGATACTAATACTACCCC
TCACGCCCTTTCGACACCCCTACCACAATGCAACGGTTGTGAAGTACAGGTTGGATATTATATTGGATGGGTCTCCG
TCCAGGACCAAGTCGAGTCGCTTGTCAAACAGCAGGTTAGCCAGTATCCGGACTATGCGCTGACTGTGACGGGCC
ACAGGTATGCCCTCGTGATTTCTTTCAATTAAGTGTATAATACTCACTAACTCTACGATAGTCTCGGAGCGTCCC
TGGCAGCACTCACTGCCGCCAGCTGTCTGCGACATACGACAACATCCGCCTGTACACCTTCGGCGAACCGCGCA
GCGGCAATCAGGCCTTCGCGTCGTACATGAACGATGCCTTCCAAGCCTCGAGCCCAGATACGACGAGTATTTCC
GGGTCACTCATGCCAACGACGGCATCCCAAACCTGCCCGGTTGAGCAGGGGTACGCCCATGGCGGTGTAGAGT
ACTGGAGCGTTGATCCTTACAGCGCCCAAGACACATTTGTCTGCACTGGGGATGAAGTGCAGTGTGTGAGGCC
AGGGCGGACAGGGTGTGAATAATGCGCACAGCACTTATTTTGGGATGACGAGCGGAGCCTGTACATGGTGATCAG
TCATTTACAGCCTCCCCGAGTGTAACAGGAAAGATGGATGTCTCGGAGAGGGCATGCATGTACGTATACCCGAAGC
ACACTTTTTCGGTAAATCAGGACATGTAATAAGTTCTTCCATGAATAGATATGGTTACCCTCACCATAAGCCTT
GAGGTTGCCTTTCTCTTTTGATTGTGAATATATATTTAAAGTAGATGACAGATATCTCTAAACACCTTATCCGCT
TAAACCCATCATAGATTGTGTACGTGATAGACCCCTTGAATGATGAGCGAAATGTATCAGTCCCGTTTAAATCA
AACCCTTTTACGCTAGCACAGTCAGAATACACCAACCCCATTTCTAAGGTAGTACTAAATATGAATACAGCCTAAA
TGCATCGCTATATGATCCCATAAAGAAGCAACAACCTTTTCCAGTCTCGTTTTGCGCTGCGAAGAGCTAGCTCTAC
CATGGTCTCAATTATGAGTGGAGCGTTTAGTCTCGTTTAAAGCCTAGCTATCTTATAAGGACAACACATGTACATG
GGCTTACTTGTAGAGAGGTAGGATCCCGGGCTTCTTCACATCTCGAGGAGTTGTCTACACGTGCGTCCATGTCA
TAAGCCGGTACTCGACGTTGTCGTGACCGTGACCCAGACCCCTGTTGATAGCGTTGAGAAGGCCCTATATTTGAA
TTTCCAATCTCAGCTTTACGAAGATATGCCCATGGTGGAGGGTTAGTAAACCGATGATGATCGTGTGCAGCATGA
GATGAGACCGTGGCCAATCCTGTTCAAATGCCAAGACCCGCCCTCTACCACATGTAAGGCATCCGTGCGCCGCAC
GTTGAATTGTGCAAATGCCGAGATCATAAAGCGGCCACACTTCCACGTGCGTACTGGATGGGTGCGCGTGGCC
ATACTGTGTTTTCCATTGCGTGGGTGCTTCGTGTTACTGCGACGAGATTCTGTAGGCAAGGCGCAGGGCTCTCT
TCTGAGGTAGAAAACACCCCATATTAATCTGAATTC

5F 4/2/47 Gel 1



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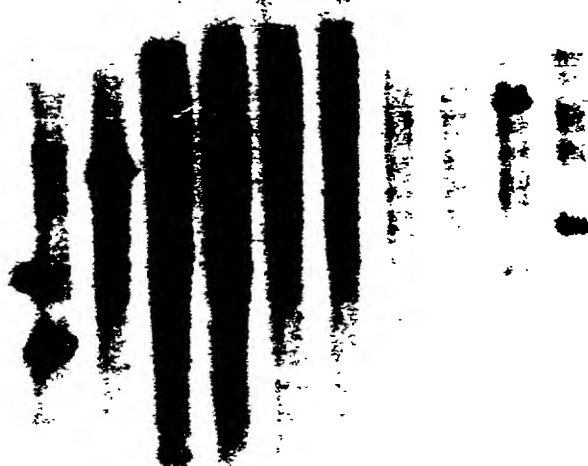
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Fig. 7

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37A°2 KADOK

15 16 17 18 19 20 21 22 23 24 25 26 27 28



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Fig. 8